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ABSTRACT

Universities worldwide are consolidating and enhancing their commitments to various models of e-learning. These activities are leading to the adoption of corporate-wide e-learning systems and accompanying changes in structures, processes, and infrastructure requirements. The professed ideal is to identify narrowly defined corporate instructional technology (IT) solutions that can deliver the full range of educational, administrative, and student support features to meet the organizational need to expand e-learning activities globally. The trend seems to be away from locally driven and controlled IT development and adoption towards investments in Instructional Management Systems (IMS). In reality, however, universities generally are developing and using a broader array of solutions to meet their needs than may be deemed desirable under a more centralized, corporatized IT approach. Focusing on IT evaluations conducted at Deakin University (Australia), this paper examines these trends by analyzing the drivers shaping corporate approaches to IT implementation, and reflects critically on some of the educational, economic, and organizational tensions and issues evident in institutional approaches to establishing such systems. The paper highlights the ongoing need for innovative, dynamic organizational solutions to progress the e-learning agenda, and the thoughtful reconciliation of centralized and decentralized approaches to achieving desired ends. (Contains 18 references.) (Author/MES)

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TOWARDS INSTITUTION-WIDE ONLINE TEACHING AND LEARNING SYSTEMS: TRENDS, DRIVERS AND ISSUES

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Abstract

Universities worldwide are consolidating and enhancing their commitments to various models of e-learning. These activities are leading to the adoption of corporate-wide e-learning systems, and accompanying changes in structures, processes and infrastructure requirements. The professed ideal is to identify narrowly defined corporate IT solutions which can deliver the full range of educational, administrative and student support features to meet the organisational need to expand e-learning activities globally. The trend seems to be away from locally driven and controlled IT development and adoption towards investments in Instructional Management Systems (IMS). In reality, however, universities generally are developing and using a broader array of solutions to meet their needs than may be deemed desirable under a more centralised, corporatised IT approach.

This paper examines these trends by analysing the drivers shaping corporate approaches to IT implementation, and reflects critically on some of the educational, economic and organisational tensions and issues evident in institutional approaches to establishing such systems. The paper highlights the ongoing need for innovative, dynamic organisational solutions to progress the e-learning agenda, and the thoughtful reconciliation of centralised and decentralised approaches to achieving desired ends.

Keywords

instructional management systems, innovation diffusion theory, centralisation, decentralisation, online learning designs

Introduction

Throughout the 1990s, tertiary organisations have been developing flexible program delivery systems, supported by online teaching/learning strategies. During this time, large amounts of institutional and sectoral funding was made available to stimulate educational technology development and implementation at all levels of the institution. However, most activity was driven by local discipline-based initiatives that sought e-learning solutions for educational issues or problems. The emphasis was on improving student learning, and enhancing accessibility to program offerings. As such activities developed, generated by multiple areas of strategic thinking and action, common learning, teaching and technical solutions emerged of relevance across disciplines and faculties. With it came a perceived need for institution-wide approaches to implementing and supporting online teaching/learning systems and a concomitant desire for efficiencies in e-learning practices by adopting a corporate approach to selecting and integrating teaching, learning and administrative systems.

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Such a corporate-driven view to achieving quality, efficiency and accessibility pay-offs, was given further impetus by the need to compete effectively in an increasingly global, e-learning marketplace.

This paper argues that various stakeholders with their own particular emphases and desired outcomes shape the e-learning agenda. Moreover, in universities characterised by diverse views about what constitutes desired education, as transferred to or possibly transformed by online learning possibilities, it has become problematic to reconcile, let alone resolve, divergent expectations of what should shape institutional policy in relation to online systems roll-out. The paper outlines valid reasons for increased and decreased centralisation of thinking and effort in this regard. However, it is argued that extreme views to fully centralise or fully decentralise approaches are equally harmful to generating and capturing for the organisation's benefit educational technology innovation, educational program diversity, and a differentiated competitive position in the marketplace. Since the pendulum seems to have swung in recent times to a greater degree of centralisation, the focus of the paper is to consider this trend critically. It is ultimately contended that a balanced, moderated approach is required to ensure all stakeholders and viewpoints are productively acted upon, and to achieve concurrently quality, efficiency and productivity gains. This requires a recognition of the importance of institutional politics in determining e-learning environments.

Background

In the early 1990s, Deakin University merged with two other institutions. Capitalising on the strengths of its antecedent organisations, the University embarked on major teaching program review and rationalisation, underpinned by a strategic commitment to offering flexible teaching programs across its 6 campuses and off-campus (Holt & Thompson, 1995). Currently, 45% (12,661) of the student population is on-campus, 12% (3421) multi-modal, and 43% (12,110) off-campus, with a further 34,500 enrolled in professional education and training through its entrepreneurial arm, DeakinPrime. In line with other universities it progressively adopted new technology to support and enhance the learning experience for both on- and off-campus student cohorts. In fact, off-campus/on-campus modes of enrolment, whatever their continued technical necessity, are increasingly giving way to the new dichotomy of on- or offline education, equally relevant to learning experiences in any mode.

Throughout the 1990s, the University attracted substantial external funds, and also invested from within, to develop its e-learning environments. [See Deakin Interchange pilot implementation (Goodwin, Rice, Stacey & Thompson, 1995) Information Technology Enhancement Program (Holt & Thompson, 1997); Videoteaching implementation (Rice & Spratt, 1999); Online Teaching and Learning Enhancement Project (Holt, Rice & Spratt, 1999)]. Much of this investment was used to address discipline-based concerns, or develop technology systems that showed institutional promise. The University's educational technology program was driven strongly at the 'grassroots' level and by faculty-based strategic thinking and action. The impetus was to improve the quality of learning and extend the accessibility of the University's programs, and associated online service support.

Many of the University's innovative learning, teaching and technology practices were codified in *The Competitive Edge* Deakin's Teaching and Learning Management Plan 2000-2002, and further strategic commitment was made to consolidate, coordinate and build on such developments. The desire to take the University forward in the global virtual learning marketplace led to investment in an Instructional Management System (IMS)[1] in late 1999 (Calvert, 2001). This acquisition reflected the University's desire to embrace a stronger, more centrally-directed approach to the development and use of online learning/teaching throughout the entire organisation. This IMS was implemented alongside other in-house and commercially-acquired IT solutions supporting e-learning at Deakin. A pilot evaluation of the implementation was undertaken in 2000 (Rice, Bowly, Holt & Sims, 2001). Key outcomes of this and preceding IT evaluations conducted at Deakin are drawn upon in the remainder of this paper.

Environmental Imperatives and Stakeholder Needs

For the purposes of this analysis we identify the following five stakeholder groups with vital interests in the implementation of online teaching and learning systems:

- **University senior Executive**, strategic competitive considerations
- **Management of administrative support units**, cost-effective service delivery considerations
- **Management of academic support units**, learning resource management and quality of education considerations
- **Faculty academic management/leadership**, faculty-based competitive and marketing considerations
- **Faculty academic and teaching support staff**, discipline- and program-based educational considerations.

The vital interests of these stakeholders are summarised in Table 1.

1 University Executive	2 Management, administration units	3 Management, academic support units	4 Faculty academic management/ leadership	5 Faculty academic & teaching support staff
1.1 Strategic partnerships	2.1 Integration of administrative & online learning systems	3.1 Control of online intellectual property (IP)	4.1 Faculty, school, program approaches	5.1 Perceived relevance to discipline
1.2 Institutional competitive positioning	2.2 Centrally controlled systems	3.2 Cataloguing of learning resources	4.2 Enhancing quality of learning at program level	5.2 Diversity of educational philosophies
1.3 Institutional quality assurance approaches & procedures, e.g. course (re)accreditation	2.3 Centrally located systems	3.3 Rights management of IP	4.3 Achieving desired discipline-specific & generic student attributes	5.3 Diversity of teaching & assessment strategies
1.4 Strategic program developments (with industry)	2.4 Systems running on preferred technical platform	3.4 Quality control of online resources	4.4 Extending accessibility of teaching programs	5.4 Role, nature & purpose of classroom teaching (where relevant)
1.5 Strategically driven staff development	2.5 Economies of scale	3.5 Standards & templates for online resource delivery	4.5 Marketing teaching programs & research	5.5 IT for efficient class management
1.6 Commercialising Deakin learning resources	2.6 Efficiencies in system administration	3.6 Online delivery of academic support services	4.6 Sustainable approaches to faculty-wide media/ technology selection & use	5.6 Local collegial support
1.7 Buying-in external learning resources	2.7 One-stop-shop for delivery of online administration services	3.7 Educational quality of online environments	4.7 Faculty-wide professional development needs	5.7 Local educational & technical support
1.8 Teaching/ learning vision	2.8 Online marketing of courses	3.8 Teaching/ learning-related professional development	4.8 Sensitivity to diversity of teaching needs constituting faculty program portfolio	5.8 Institutional support and incentive, e.g. innovation funding, performance appraisal, promotion
1.9 Organisational restructuring to achieve above		3.9 Media/ technology mixes		5.9 Perceived institutional and faculty leadership pressure to move online
		3.10 Evaluation & research on educational impacts		5.10 Sensitivity to diverse student needs at program and unit level
				5.11 Just-in-time discipline, and individually-based staff development

Table 1: Institutional stakeholders and their vital interests

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Each stakeholder has a diversity of interests and concerns. However, we argue that each tends to have a particular focus in progressing e-learning. Senior Executive's focus is shaped strongly by external environmental threats and opportunities and overall institutional positioning in competitive marketplaces. While strategic initiatives are taken to forge collaborative arrangements within the system, it can be argued that these are motivated by a desire to defend or extend inter-institutional competitive positions. Management of administrative units focus on the cost-effective delivery of administration services to support students and staff, wishing to conserve resources through systems-related efficiency gains. Management of academic support units can have eclectic interests, some siding with efficient administration practices, while others more directly related to faculty leadership and individual academic concerns. Faculty leadership are centrally concerned with the effective management of their teaching programs, achieving the desired quality of learning for the faculty-based student cohort and the competitive positioning of the academic grouping of disciplines overall in maintaining and enhancing funding support for teaching and research. Within their discipline-based programs, individual academics are primarily concerned with achieving a satisfying, quality educational experience with and for their students and themselves. Moreover, many academics are committed to innovatory educational practices and desire a respect for a diversity of viewpoints constituting the world of educational theorising and practice. A case study of IMS selection being driven predominantly by educational stakeholder needs is well documented by Sawers and Alexander (1998, 2000). Whatever criteria are used in choosing an IMS solution, ultimately, academic teaching staff will be the key stakeholder group who determine the nature and scope of adoption of the technology.

Centralisation Versus Decentralisation

Centralisation here refers to control over organisational resources rather than the location of service delivery. Control over the provision of IT resources and services might be centralised whereas the actual points of provision might be decentralised by faculty and/or campus, particularly in geographically dispersed multi-campus institutions (Holt & Thompson, 1998). The issue is the extent to which online teaching/learning developments and associated systems are centrally directed by Executive level action and operationally controlled by academic and administrative support groups on behalf of faculty. In a highly centralised arrangement, power and resources are concentrated at the centre whereas in a more decentralised environment there is considerable latitude and discretion to exercise power locally (i.e. faculty/department level). In the latter case, power is more dispersed throughout the organisation.

The potential advantages and assumptions underlying centralised and decentralised approaches to IT strategies and implementation are outlined in Tables 2 and 3, respectively. The assumptions represent issues/concerns open to debate and conflicting viewpoints.

Potential advantages	Assumptions
1 Agreed to institutional vision of teaching/learning can drive institution-wide investments in IT	1 Institutional vision of teaching/learning reached through consensus and acted upon consistently throughout organisation
2 Online teaching/learning systems can be implemented across the organisation providing consistent teaching and learning environments	2 Ideally one prime online teaching/learning system determined and committed to across the organisation
3 Systems can be easily integrated with other corporate administration applications leading to system efficiencies	3 Online teaching/learning system runs on same technical platform as corporate administrative applications and easily integrated with them
4 Scalable solutions can be deployed and expanded over time in response to total organisational demands for online learning	4 Clear direction and operational planning for systematic expansion of online delivery throughout organisation
5 Learning resources can be stored and delivered in a secure, searchable environment	5 Online system has computer-managed learning and searchable digital object features. Secure, centrally controlled system won't create impediments to publishing resources online
6 Learning resources can be easily monitored to meet quality assurance standards	6 Formal standards of what constitutes quality learning resources understood and adhered to through organisation
7 Learning resources can be developed and produced in standardised templates to QA requirements	7 Standardised templates can accommodate different curriculum designs, pedagogies and assessment strategies
8 Home-grown learning resources can be easily protected and commercialised	8 Significant markets exist for selling online learning resources
9 Home-grown resources can be reused for alternative purposes through organisation	9 Staff are comfortable with their materials being re-purposed and used in different courses offered by the institution
10 Central staff development funding can be strategically targeted to develop staff capabilities in chosen systems	10 Centrally engineered staff development program can impact broadly across a large number of staff in a big organisation
11 Central design, development and production expertise can use the technical system to create and migrate applications across the University	11 Central capabilities have in-depth expertise of the technical platform on which the online system is running to execute desired migration of generic solutions
12 Central system/s can be efficiently administered in one central location by one group of well qualified IT staff	12 In a multi-campus environment, network infrastructure is robust enough to support use of system from one central location

Table 2: Potential advantages and assumptions underlying centralisation

Potential advantages	Assumptions
1 IT development and adoption driven by local discipline/program-based needs and requirements	1. Local units willing and able to articulate and execute on local needs
2 Local ownership of systems' solutions encourages greater commitment to their full integration and mainstream use	2 Ownership and commitment more likely to be negotiated and enacted by smaller more like-minded groups
3 Staff development associated with local system adoption dispersed and delivered in a customised, just-in-time fashion to meet local needs	3 Professional development integral to the task of curriculum development, and development and adoption of online learning driven by curriculum-related needs
4 Local developments are seen to accommodate diverse educational paradigms, teaching and assessment strategies across Faculty programs	4 Universities represent a diversity of viewpoints on what constitutes knowledge, knowing, teaching, learning, and the roles of teachers and learners. These must be expressed through quite different uses of technology
5 In being more responsive to local educational needs, there is greater impetus for innovation, diverse online learning developments, formative evaluation, solutions enhancement	5 Innovation is generated at the local, micro level of an organisation and driven by the need for teaching innovators to address or solve educational problems or challenges relevant to **their** teaching
6 Locally situated and controlled development, design and production support more attuned to delivering relevant services required by teaching staff	6 Organisation resourced well enough to establish local support capabilities able to meet locally generated needs
7 Local developments can evolve over time into key institutional activities to the extent that solutions are adopted at the grassroots level across disciplines, departments/schools and faculties	7 Local development can evolve and take root through the organisation through informal networking, cross-school, cross-faculty collaboration between interested parties (may need central group to be a catalyst for cross-fertilisation and to support progressive migration towards institutional solutions)
8 Local developments can be effectively commercialised so that those involved in their creation have ownership and incentive to see their applications used elsewhere	8 Local developments robust enough to undergo critical external scrutiny and be well maintained and supported over time if sold. Those who innovate receive in part the financial returns for their labours

Table 3: Potential advantages and assumptions underlying decentralisation

A key dilemma outlined in Tables 2 and 3 is that while a centralised system can deliver standardised approaches to materials presentation of possible benefit to student learning, such systems can be constraining in regard to the education design of programs. Technologies that are built on an instructivist model are inherently constraining of the possibilities for customisation based on other educational paradigms. It may be easy to customise the visual form of the material, but less so in regard to changing the features of a system and its educational purpose.

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Rationale for the Adoption of Corporate Approaches

As stated earlier, on balance there has been a move to more centralised, corporatised approaches underpinned by the following factors:

- Achieving scalability and administrative systems integration and efficiencies
- Commercialising home-grown learning resources
- Reusing learning resources for alternative purposes within organisation
- Acquiring materials and protecting intellectual property rights of external learning resource suppliers
- Assuring quality of learning resources through adherence to standards of presentation and monitoring resources over time
- Adopting a common online teaching and learning system as a platform for supporting inter-School and inter-Faculty courses and spearheading competitive strategies in the virtual global marketplace.

We acknowledge that most universities have centralisation and decentralisation features and could be reasonably classified as hybrid systems of organisational control. This is a matter of degree, not kind. However, conflicting stakeholder interests and expectations can arguably push and pull the organisation dysfunctionally in one direction or the other, too far in degree as perceived by at least one stakeholder whatever the direction. The outcome of this can be continuing undercurrents of unresolved tension between parties.

Proponents of highly centralised approaches to IT systems argue that benefits would be maximised ideally through the adoption of one fully featured online learning system, well integrated with major administrative applications. Naturally such advocates search for such corporate IT solutions. Those inclined to a decentralised view are concerned about the ability of any system to support a diversity of teaching/learning approaches, and the consequent deleterious effect this may have on educational product differentiation and innovation. As Bates (2000) observes:

> ...any attempt to impose a single course authoring software solution on a whole institution is likely to impose a serious restriction on academic freedom and could lead to a highly undesirable uniform approach to teaching across all subjects. (p. 203)

Moreover, concerns might exist about excessive risk exposure if the organisation has all its 'online system eggs in one basket', particularly given the vagaries of the commercial IT marketplace if off-the-shelf solutions are acquired. One group's focus is more on reaping institutional economies of scale and attendant efficiencies, while the other group is primarily concerned with the ways online systems can dynamically and continuously add distinctive value to the educational experience.

The centralist position emphasises resource conservation and the maintenance of minimal standards. The decentralist position emphasises educational quality, diversity, differentiation and change, with its attendant consequence of some degree of resource wastage. Thompson and Holt (1997) discuss how staff attitudes towards good teaching, quality learning, and the nature of their disciplines, shaped a variety of views on the potential of new technology to assist them in their work. More generally, Peters (1997) argues that the pursuit of competitive advantage in the business world should be fundamentally driven by organisational cultures conducive to innovation in product designs and the avoidance of tendencies towards product commoditisation.

Awkward Realities: Implementing Corporate Solutions

Diffusion of Innovation

The IMS acquired by Deakin was a major new technology for the organisation and hence progress in its implementation can be understood in relation to theory on the diffusion of innovation. The desire to commit to a corporate IMS was clearly underpinned by many of the perceived advantages advocated by those with a centralist viewpoint of the benefits of such investments.

Rogers (1995) quoted by Geoghegan (1996), articulates five characteristics of innovations that influence the rate of adoption and suggest whether an innovation will ultimately impact positively on targeted users:

- The **relative advantage** of the innovation over what it might replace or augment;
- The innovation's **compatibility** with existing online learning cultures;
- The **complexity** of the innovation;
- The innovation's **trialability**, i.e. ability to experiment before adoption;
- The **observability** or **visibility** to other potential adopters of the results achieved by using the innovation.

The rate of adoption of the IMS at Deakin has been steadily, but modestly increasing in the second year of use. The extent to which usage will progress rapidly beyond selected targeted areas for major implementation support, and those who might be seen as early adopters, remains uncertain. Reasons for this might be:

- Teaching staff were inadvertently led to believe that an IMS was a tool that could easily be used to re-purpose their traditional media learning resources into interactive, value-adding multimedia Web-based courseware with minimum time and effort on their behalf *(raising the issue of complexity);*
- The solution is seen to be premised on an *instructivist* view of learning and hence may not be compatible with or supportive of online pedagogies shaped by *constructivist* learning theory *(raising the issue of compatibility);*
- A solution seen to be simple and easy to use was not necessarily one able to accommodate flexibility of design of online learning environments at a level below the general issue of paradigmatic concerns *(raising issues of compatibility and complexity);*
- The general purpose IMS has had to find its niche alongside other specialist technologies used and institutionalised at the University over a number of years, including a major specialist computer conferencing system *(raising the issue of relative advantage);*
- The IMS rolled out through central support agencies and running on a centrally controlled technical platform has had to place itself amongst a range of locally developed, adopted and controlled systems established to meet the particular needs of certain schools, and programs in the University *(raising the issue of relative advantage);*
- Investment in the IMS qua technical infrastructure solution was not accompanied by a substantial investment in supporting teaching staff, at the institutional or faculty levels, to rethink their practices to take advantage of the potentials of the IMS *(raising issues of trialability and observability/visibility);*
- An additional external stakeholder (professions and industry) needed to be considered in using the solution in the University's commercial arm to meet their continuing professional development and corporate training needs through online learning strategies *(raising issues of observability/visibility).*

Clearly, centralised approaches that assume a 'greenfields' site for the introduction of an IMS can run up against the awkward realities of modest steps to mainstreaming caused by entrenched cultures associated with existing institutionalised technologies. The five factors listed above must all be strongly positive to induce voluntary switching from a suite of central and local solutions to a major new centrally directed IMS.

Can One System Do It All?

The University now has a portfolio of centrally and locally supported technologies underpinning its online teaching/learning environment. The IMS is usefully contributing in enhancing the functionality of the University's online activities. This situation may not sit comfortably with stakeholders wishing to see the IMS occupying a more prominent position as the principle e-learning solution at Deakin. Neither is its introduction necessarily going to sit comfortably with those with pre-existing technology commitments and more decentralist tendencies. We contend, however, that the University's best interests have been served through a reasonable diversity of systems, solutions and applications, centrally and locally controlled. This probably resonates strongly with the experiences of many others involved in IT implementation in Australian higher education (see McNaught, Kenny, Kennedy & Lord, 1999). King, McCausland and Nunan (2001) and Davis (2001) have documented such hybrid approaches in the field of open and distance education.

Conclusion

In conclusion, we argue that moderate and reasoned outcomes are best achieved not through stakeholder misunderstanding and inevitable tension and friction, but through the instigation of processes involving all stakeholders, a respect for their rationales and viewpoints, and a reconciliation of differences to ensure a balanced approach. The balance should give appropriate weighting to educational diversity, educational quality, ongoing innovation to ensure differentiation of online offerings, on the one hand, and institutional-wide systems' efficiencies, competitive market positioning, and certainty and stability of IT system's performance, on the other. Clearly, educational needs should be strongly foregrounded in the process.

References

Bates, A.W. (2000). *Managing Technological Change Strategies for College and University Leaders*. San Francisco: Jossey-Bass.

Calvert, J. (2001). Deakin University: Going Online At A Dual Mode University. *International Review of Research in Open and Distance Learning*. [Online]. Available: http://www.irrodl.org/content/v1.2/deakin.html [September 2001].

Davis, A. (2001). Athabasca University: Conversion From Traditional Distance Education Online Courses, Programs and Services. *International Review of Research in Open and Distance Learning*. [Online]. Available: http://www.irrodl.org/content/v1.2/au.html [September 2001].

Geoghegan, W.H. (1996). Instructional Technology And The Mainstream: The Risks Of Success. Maytum Distinguished Lecture. Suny College at Fredonia.

Goodwin, C., Rice, M., Stacey, E., & Thompson, L. (1995). *An Evaluation of Deakin Interchange Pilot Program. Final Report*. Deakin University.

Holt, D.M., & Thompson, D.J. (1995). Responding to the technological imperative: the experience of an open and distance education institution. *Distance Education: An International Journal. 16*(1), 43-64.

Holt, D.M., & Thompson, D.J. (1997). Information Technology Enhancement Program (ITEP) Project Report *Final Report*. Deakin Centre for Academic Development. Deakin University.

Holt, D.M., & Thompson, D.J. (1998). Managing information technology in open and distance education. *Distance Education: An International Journal. 19*(2), 197-227.

Holt, D., Rice, M., & Spratt, C. (1999). *Online Teaching and Learning Enhancement Project Institutional Report*. Deakin Centre for Academic Development.

King, B., McCausland, H., & Nunan, T. (2001). Converting To Online Course And Program Delivery: The University of South Australia Case Study. *International Review of Research in Open and Distance Learning*. [Online]. Available: http://www.irrodl.org/content/v1.2/unisa.html [September 2001].

McNaught, C. Kenny, J., Kennedy, P., & Lord, R. (1999). Developing and evaluating a university-wide online Distributed Learning System: The experience at RMIT University. *Educational Technology and Society. 2, 4*. [Online]. Available: http://ifets.massey.ac.nz/periodical/vol_4_99/mcnaught.html [September 2001].

Peters, T. (1997). *The Circle of Innovation You Can't Shrink Your Way To Greatness*. London: Hodder & Stoughton.

Rice, M. & Spratt, C. (1999). *The Videoteaching Project Evaluation Report.* Deakin Centre for Academic Development.

Rice, M., Bowly, J., Holt, D.M., & Sims, R. (2001). *Implementing the Instructional Management System 'TopClass' An Evaluation of Four Pilot Studies.* Internal Report. Learning Environments, Deakin University.

Rogers, E.M. (1995). *Diffusion of Innovations.* (4th ed.). New York: Free Press.

Sawers, J., & Alexander, S. (1998). A Centralised Approach to the Adoption of a University-wide Web-based Learning Tool. In R. Corderoy (Ed.), *FlexibilITy: The next wave? Proceedings of the 15th annual Australian Society for Computers in Learning in Tertiary Education '98 conference*. (pp. 609-615). University of Wollongong, 14-16 December.

Sawers, J., & Alexander, S. (2000). Choosing a Web-Based Learning Tool: Focussing on the Needs of Users. In R. Sims, M. O'Reilly & S. Sawkins (Eds.), *Learning to choose. Choosing to learn. Proceedings of the 17th annual Australian Society for Computers in Learning in Tertiary Education 2000 conference*. (pp. 571-580). Southern Cross University, Coffs Harbour, 9-14 December.

Thompson, D.J., & Holt, D.M. (1997). Tertiary pedagogy encounters the technological imperative. *Distance Education: An International Journal. 19*(2), 335-54.

Endnotes

1. IMS refers to a system that allows for the creation and delivery of material, online assessment, communication, and tracking of student progress. Increasingly these systems are being referred to as learning management systems. However, we use the acronym IMS intentionally because this is the way the system was described by the vendor and promoted within the University community.

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